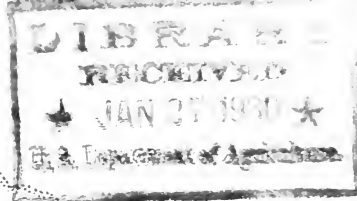


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Do not assume content reflects current scientific knowledge, policies, or practices.

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Pedigreed Seeds

for Progressive Growers

1929

1930 Cat. Will follow

THE TESTS TELL—

—READ INSIDE

N. C. Livermore

Vegetable Seed Trials
D. N. Shoemaker
JAN 22 1930



Honeoye Falls, N. Y.

Spring 1929

Dear Friend:—

Progress characterizes American farming to-day notwithstanding all the talk about depression and grief. While many are still bewailing the misfortunes of agriculture and seeking a political nostrum, the industry itself is moving steadily toward better times. Progress is being made with the increasing use of better machines, better strains of crops, better fertilizing materials, better methods for pest control, better feeding methods, better live stock, better systems of farming, better marketing information and more comforts and conveniences in the farm homes. Not all is done yet but no other period in history has seen so much progress in agriculture as the present.

Not the least important factor in this progress, is the use of better strains of our common crops. Most of these have been produced by plant breeders and pathologists at our experiment stations and some by farmers. Some were chance findings, some the result of long patient selection, and others were produced by artificially crossing different strains in order to combine a desired feature of one with good features of the other. The results are not only interesting but also of great value.

Just as modern farm machines, tractors and trucks speed up our work, save labor and lower costs, so also do these present day improved varieties of crops enable us to produce at lower cost, greater profit and also with more satisfaction.

As farmers we should know more about what has been done and is being done. It is our job to keep ourselves abreast the times. Doing that helps us individually and contributes that much to the progress of agriculture.

At Quaker Hill Farm we grow and handle certified seeds of modern strains of field crops. It has paid us well and hundreds of our customers all over the North Eastern States, to use these labor saving, profit making seeds. If you would have the latest and best in farm seeds for 1929, read the following pages.

Sincerely,

K. C. Livermore

Quaker Hill Farm



Honeoye Falls, N. Y.

Seed Offerings—1929

OATS

Pages 4 to 6

Cornellian. Highest yielder of clear meats, good straw, wide adaptation.
Upright. Stiffest straw of all. Good yields. Especially suited to rich ground.

BARLEY

Pages 6 to 7

Alpha. Absolutely the best by College tests for North Atlantic States.

FIELD PEAS

Pages 7 to 8

Quaker Hill Selected. Small seeded, high yielding varieties that ripen with our oats and barley. Tested seed 100% disease free, which is most important.

MIXTURES

Pages 8 to 9

Oats and Barley. Cornellian and Alpha, ripen together. Make bigger yields of better feed at lower cost.

Peas, Oats and Barley. Quaker Hill Selected Peas added, make still better feed and yield, where peas do well.

Peas and Oats. For green feed or hay. Upright Oats and our peas stand up and yield large tonnage.

POTATOES

Pages 10 to 14

Irish Cobbler. Most profitable early. Finest Prince Edward Island certified seed.

Green Mountains. Medium to late, high yielder, for cool climates. Prince Edward Island certified.

Rurals. Strong vined, deep rooted, drouth resisting, late variety. A well-bred high yielding strain. New York certified.

Russets. Same as Rurals except for russet skin and more resistant to scab and rot. New York and Michigan certified.

SWEET CLOVER

Page 15

White Blossom Biennial. Hardy strain from Northern Michigan. Scarified seed. Recommended for temporary pasture and soil improving purposes.

CORN

Pages 16 to 17

All guaranteed 90% or better germination

CORNELL No. 11. Grown from selected, ear-tested, disease free seed. Best 110 to 120 day yellow dent for husking or silage.

West Branch Sweepstakes. Grown from selected, ear tested, disease free seed. Later and larger corn. More grain per acre than other large varieties, husked or in silo.

Angel of Midnight and Sheffield. Two very early maturing 8-row yellow flints. High yielders in variety tests.

BEANS

Pages 18 to 19

Perry Marrow. Hybrid developed for disease resistance and yield. A money maker.

Robust Pea. Disease resistant, high-yielding. Michigan selection.

Wells Red Kidney. Discovered by New York farmer.

CABBAGE

Pages 20 to 22

Quaker Hill Danish. One of the best in New York and Pennsylvania state and county tests. Seed is double treated.

WINTER GRAINS (Available in September)

Page 23

Forward Wheat. Best red. Honor Wheat. Best white.

Rosen Rye. One of the best. Cornell No. 76 Rye. A new high yielder.

Read about these good seeds. See price list and order sheet enclosed.
Order to-day.



Oats

For twenty years the plant breeders at the N. Y. State College of Agriculture have been testing and improving oats.

More than 4,000 individually selected oat plants, hundreds of artificially produced hybrids and practically all commercial varieties offered by seedsmen, have been thoroly tested. Out of this great number, eight strains of oats were found to be much superior, Cornellian, Ithacan, Upright, Victory, Standwell Empire, Comewell and Wolverine. Since 1921 these have been continued in the tests and other new hybrids and selections have been given trial. At present three strains stand out as markedly better than all others for conditions in this and in fact most of the North Eastern States. They are Cornellian, Ithacan and Upright.

CORNELLIAN OATS

Yield Record

In 51 tests about N. Y. State from 1921 to 1928 Cornellian averaged 55.4 bushels per acre. It tests 75.3% meats. So the yield of actual meats was 1335 lbs., the highest of all.

Ithacan was a close second with an average yield of 56.2 bushels, testing 71.8% meats, making the yield of clear meats 1291 lbs.

Another selection, not yet named, has averaged 2 to 3 bushels higher yield than these but its straw is so weak it cannot be recommended. In due time the plant breeders probably will combine this yielding ability with a stiff straw like that of Upright and give us a still better oat.

In Pennsylvania tests from 1924 to 1928 at State College, Cornellian averaged 66.3 bu. per acre out yielding Patterson, Victory, Crown, Wasa, Keystone and other improved oats.

Highest Feeding Value

Most oats test under 70% meats, some as low as 60%. Cornellian's test of 75% is the highest. This means feed value and weight per bushel. Cornellian usually weighs 40 lbs. per struck bushel. It makes better feed for any stock than other oats.

Strength of Straw

Of these better oats only one is considered to have a stronger straw than Cornellian, that one being Upright. Except on very rich land, however, Cornellian usually stands as well as Upright and better than most oats.



Cornellians Average Highest Net Yield of Feed

Ripens With Alpha Barley

The Cornellian Oat is enough earlier than Ithacan and the other good oats to ripen with Alpha Barley. This is an important advantage for Cornellian because the combination of these two in mixture is very desirable, as described on page 8.

Origin and Description

The original selection of Cornellian came out of a field of Canada Cluster, but it must have been a mixture or a sport, for it does not resemble that variety. It is tree type with stiff wiry stem and rather narrow leaves. The grain is grayish to black, very thin hulled and noticeably slim and small. The meat is large in proportion. The grain usually weighs 38 to 40 lbs. per struck bushel. It matures a little earlier than mid season varieties.

UPRIGHT

Many farms have certain fields on which oats usually lodge. In these cases stiffness of straw is the all important consideration in choosing a variety. A large yield is of no advantage unless it can be harvested.



A Perfect Stand of Upright Oats Where Others Have Always Lodged.

Stiffest Straw of All

Upright Oats have demonstrated their ability to stand when all others have gone down on scores of New York farms. The strength of the straw is remarkable. Even on the richest land they will stand thru severe storms. Under such conditions they will readily outyield Cornellian or Ithacan, altho on upland they average about four bushels less per acre. For grain this unquestionably is the oat to use on bottom lands and on many dairy farms where the cropped land is rich.

Best for Green Feed or Hay

Upright is a tall leafy type of oat and, in our judgment, yields a heavier tonnage of green feed or hay than any other variety. Its standing ability will enable it to carry a heavy load of peas, when peas are sown with it.

Origin and Description

Upright is a pure line derived from a single plant selected in Jefferson County in 1913. It is a tall variety, with stout leafy straw. It is a little later in maturity than Cornellian but not too late to use with Alpha Barley and our Selected Peas, as determined in our test. The kernels are large, long

and bearded; test 71.4% meats. The grain usually weighs 36 to 38 lbs. per struck bushel. The average yield in the New York tests 1921 to 1928 was 52.4 bushels per acre or 1197 lbs. clear meats.

OUR SEED OATS

All the oats we have for sale are from fields sown with treated certified seed. The growing crops and the re-cleaned seed have been inspected for weed and disease freedom, purity, condition and germination, by experts from the N. Y. State College of Agriculture. They have more than met the requirements for certification, which means the quality is considerably better than the general run of seed oats on the market. Eight fields met requirements for registered certified which is the highest grade.

We offer guaranteed quality seed from best by test strains for the North Eastern States at very reasonable prices. Compared with using your own seed and bothering to clean and grade it, this good seed ready to sow, will cost you so little and pay you so well in increased yield and more satisfaction, that you cannot afford to be without it. See price list and order sheet enclosed.

Alpha Barley

An artificial cross between Manchuria, a six-row, and Champion of Vermont, a two-row barley, produced Alpha. It is a long headed big kernelled two-row strain. Thorough tests in New York and New Jersey show this barley excelling others in nearly every feature.

Yield Records

Alpha averaged 42.9 bushels per acre for the last seven years grown in several different New York counties. It outyielded all the other improved strains. Beardless and barbless varieties did not yield within 3 to 11 bushels as much.

In New Jersey tests at New Brunswick, Alpha averaged 45 bushels per acre, outyielding all others.

In pounds of grain and in feed units per acre Alpha Barley has yielded approximately 20% more than the best oats.

Best Straw

Compared with other barleys, Alpha has a taller and stronger straw. Even in very dry seasons it is tall enough to cut with a binder. Its yield of straw is greater than any of the other barleys and equal to that of many oats. And even with its big yield and big straw it is almost lodge proof. In New Jersey tests for 1924, Alpha stood up 100% while other barleys lodged from 11% to 70%. It will stand longer without shelling than other varieties.

One Weakness

Alpha Barley has one weakness. In some seasons it shows considerable smut. This particular smut is carried inside the seed rather than outside as with oats and certain six-rowed barleys, and can be controlled only by hot water treatment of the seed. In most seasons this smut does not appear at all or may affect less than 1% of heads, and be of no consequence. Cold wet conditions following planting seem to favor the development of the smut. It does not increase each year as does smut in oats but fluctuates from practically nothing up to 5% and occasionally 8% or 10%. In spite of this weakness, Alpha has made its record yields.

Ripens With Cornellian Oats

The later maturing of Alpha Barley as compared with other varieties is almost as important as its yielding ability. It ripens almost exactly with Cornellian oats. This makes possible the use of these two wonderful yielding grains in mixed sowings. See page 8.

Our Alpha Seed

All our barley fields and samples of the re-cleaned grain were inspected by experts from the N. Y. State College of Agriculture. Nine fields met certification requirements and four met registered certified requirements. Germination ranged from 94% to 99%. From 2% to 5% of smut was reported in the certified fields, while in the registered certified only a "small-trace" was reported. The latter fields were second crop from hot water treated seed.

All seed is thoroughly re-cleaned, sacked in new bags and ready to sow. Because of its larger berry Alpha Barley is usually sown at the rate of 9 pecks per acre.

We Advise Alpha

Alpha is unquestionably the best barley for the North Eastern States. It might well replace half or more of the oats, especially on the stronger soils, because it yields more and better feed and makes nearly as much straw. It is the best barley for mixed sowing with Cornellian Oats.

No better seed is available than this from Quaker Hill Farm and our prices are reasonable. See price list and order sheet enclosed.



The Combine Helps Keep Our Seeds Pure

Field Peas

Variety Tests

"Pigs is pigs" perhaps, but there are differences between field peas even where they are all listed in the catalogs as Canada field peas. During the last three years we have been testing different varieties for yield and time of maturity and know which are better for eastern conditions, especially when planted with oats and barley for feeding purposes.

Beware Diseased Seed

In recent years field peas in the eastern section have been severely damaged or completely destroyed by a group of fungus diseases known as *Ascochyta* spp. Investigations by the Geneva Experiment Station have shown that these organisms are carried on or inside the peas of a large proportion of the lots of seed on the market. A small percentage of infection may spread so much as to destroy all the peas in a field. On account of this, we have every lot of peas tested for disease infection and buy only those testing 100% disease free. Practically all peas grown in Eastern and North Central States and Canadian Provinces show disease infection. This accounts for the usual poor yield of peas when home grown seed is used.

Quaker Hill Selected Are Safe

As a result of these precautions, the peas offered as "Quaker Hill Selected" are high yielding varieties which normally ripen at the same time as Cornellian Oats and Alpha Barley, and are lots that are free from disease infection. Planting peas of unknown variety and untested disease infection is a foolish gamble. The odds are about 3 to 1 against you.

Inoculation May Be Necessary

On soils which have not produced peas before, they usually will do much better if the soil or the seed is inoculated with the particular strain of nitrogen fixing bacteria which works on pea roots. The Laboratory of Plant Physiology, College of Agriculture, Ithaca, N. Y., on request will send free Extension Bulletin 2, Legume Inoculation, and prices on the cultures which they furnish at lowest cost.

Hints

Plant peas early. Plant deeper than for grains except on heavy soils. Some farmers report good results from dragging peas in before drilling grain. Pheasants are very destructive in peas. Watch out for them.

Supply Limited

The field pea crop was very light and our supply of selected seed is limited. Better order early. See price list and order sheet enclosed.

Mixed Grains

Thousands of carloads of western grain feeds in one form or another are sold to eastern farmers every year. A considerable part of this can be replaced profitably by home grown grains, if the right varieties and methods are used. Corn requires too much labor, under eastern conditions. Oats is not very good feed except for horses. But mixed oats and barley, or peas, oats and barley can be raised cheaply with relatively little labor and they make good feed for all live stock and poultry. Many thinking farmers are using these mixtures and keeping in the bank a larger proportion of the milk check or egg money.



Cornellian Oats and Alpha Barley
Make Better Yields and Better Feed than Either Alone

Quaker Hill Farm



Honeoye Falls, N. Y.

Oats and Barley for Grain

This mixture yields more than either alone if varieties that ripen together are used. Cornellian Oats and Alpha Barley, both high yielders, ripen together and make wonderful yields of good feed. We find that Upright Oats tho a little later, ripens closely enough with Alpha Barley so that it may be used on rich land to avoid possible lodging.

The recommended proportions are $1\frac{1}{4}$ bushels of oats and $1\frac{1}{4}$ bushels of barley by weight, this amount being enough for an acre.

Peas, Oats and Barley for Grain

The addition of field peas to the oat and barley mixture, where peas do well, increases the feeding qualities of the grain, especially for dairy cattle, usually increases the yield and leaves considerable nitrogen in the soil.

Before deciding to use field peas in a mixture consider the following points:

1. On rich soil where oats are likely to lodge, peas will grow too much to vine and too little to grain. Danger of lodging will be increased.
2. A fairly good supply of lime in the soil is essential for good results with peas, that is, enough lime for clover or alfalfa.
3. The variety should be one that ripens with the oats and barley.
4. Peas should not be used on land recently in any kind of peas which showed signs of disease. The pea diseases seem to carry over in the soil for several years and are likely to damage the new crop.
5. Be certain the seed is disease-free. Local grown peas are likely to have become disease infected and not do well. Read previous discussion beginning page 13.
6. Early sowing is better for peas. Inoculate the peas unless it is known to be unnecessary on the field to be planted.
7. Those who have used this mixture of Cornellian Oats and Alpha Barley with good field peas under favorable conditions, are most enthusiastic about the results in the granary and in the milk pail. The recommended proportions are $\frac{1}{2}$ bushel of peas, 1 bushel of oats, and 1 bushel of barley by weight, this amount being enough for an acre.

Peas and Oats for Green Feed or Hay

A drouth in summer and failing pasture always put a dent in the milk check. The milk flow can be sustained by supplementing the pasture with succulent green feed. A small piece of peas and oats located conveniently, will supply it at low cost. Upright oats and Quaker Hill Selected Peas make the best combination.

The same mixture may be cut and cured for hay. It makes a palatable and nutritious hay. If a seeding fails or more hay is going to be needed, this mixture will relieve the situation. The usual proportion is 1 bushel of peas and $1\frac{1}{2}$ bushels of oats and this amount to the acre.

We Mix Them—You Plant Them

For your convenience we offer these grains ready mixed in the recommended proportions, each bag containing the usual amount sown per acre. Certified oats and certified barley and our Quaker Hill Selected peas described herein are used. They are grown and cleaned separately and mixed better and more cheaply in our power mixer than you can do it.

Using some of the mixed grain crop for seed is not very satisfactory because of the difficulty of grading it satisfactorily and keeping the proportions correct.

You save yourself considerable trouble and delay in the busy planting time by ordering these all cleaned, mixed, bagged, ready to dump in the drill and sow. Order oats and barley mixture if your conditions are not right for the peas. If they are right then by all means use the peas too. See price list and order sheet enclosed.

Potatoes

The Outlook For 1929

For several years we have given in the catalog our opinion on the potato outlook. Of course nobody can predict with certainty a subject that depends upon so many uncertainties. But farmers have to plan ahead and the better their foresight is the better their success will be. So we'll give our views again, not to guide you but to help you form your own judgment.

Briefly we expect the acreage of early and late potatoes will be reduced to about normal, possibly a little lower for the Country as a whole. A larger proportion of the acreage than usual will be planted with certified seed. The net result, we believe, will be a normal crop with normal prices if the weather is normal. Generally favorable or generally unfavorable weather will have its usual effects on yield and prices. The chances probably are about 5 out of 7 for approximately average prices, 1 for materially lower than average and 1 for materially higher than average prices.

Aim For Low Cost Per Bushel

At average prices, only the low cost producers of potatoes make money. Some of the cost items can be reduced without proportionately reducing yield and there are means of increasing yield without increasing costs proportionately. Experiments and experience have proved very conclusively that the following are very effective means of reducing cost per bushel:—

1. Select your best potato ground, considering suitability of soil, drainage and convenience of location.

2. Use certified seed. If necessary for financial reasons, it is better to use sound culs or thirds out of a certified crop which of course means a crop that was inspected and found practically free from diseased plants, than to use the finest looking seed from fields of unknown disease content.

3. Work the weeder and spare the cultivator in controlling weeds. Weeds must be controlled but in many cases cultivating and ridging do more harm than good to the crop by cutting potato roots and drying out the soil. A weeder properly used does the job better and more cheaply.

4. Dust or spray early, regularly and thoroly to control flea beetles, leaf hopper, potato bugs, lice, blight and blight rot.

The Worst Potato Diseases Cannot be Detected in the Seed

Just what constitutes good seed should be understood. Looks are not so important as freedom from diseases. The finest looking seed potatoes may carry enough leaf roll, mosaic, spindle tuber, yellow dwarf, wilt, black leg or other diseases to make a profitable crop impossible. On the other hand, rough, misshapen, oversize, or even "pee wee" potatoes are capable of producing 400



A Leaf Roll Plant

Leaf roll is the most serious disease of Russet and Rural varieties. It reduces yields to one-third or less; is spread by insects; and can not be controlled by treating the seed or by spraying or dusting. It can be avoided only by using seed from plants free from the disease and not exposed to infection from diseased plants in the vicinity.

Note:—This picture and the two on the next page were furnished courteously by the Agricultural Extension Department of the International Harvester Co., Chicago, Ill.

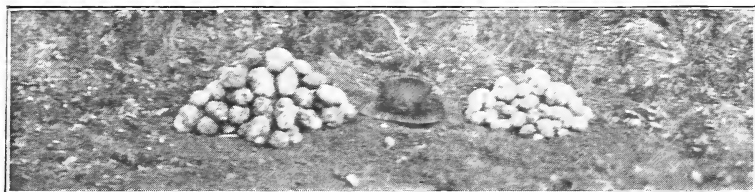
bushels per acre, if they are from plants that were free or practically free from the diseases just mentioned. Seed from plants affected with these diseases, will produce plants with the same diseases. The diseases cannot be detected in the seed and no treatment has yet been found to control them. They spread from plant to plant, roughly doubling each year, always getting worse and cutting yields lower and lower.



A Healthy Plant

A Mosaic Plant

Mosaic disease is most serious on Cobbler and Green Mountain potatoes. It reduces yields sharply and can be avoided only by using seed from healthy plants.



Yield from 15 hills
of healthy plants

Yield from 15 hills
of mosaic plants

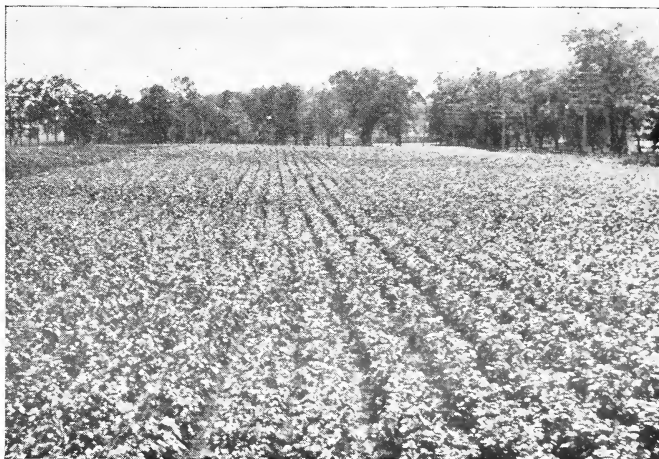
Look for College or Government Inspection and Certification Tag

So the first fact to know about seed potatoes is how much disease was present in the crop from which they came. And the place to look for it is on the official tag attached to bags of genuine certified seed potatoes. This tag guarantees that the seed is from a field that was inspected by disease experts and found free or practically free from these diseases. The experts usually are State College or government men who are in no way beholden to the grower and whose reports therefor can be relied upon. Their reports and the Standards for certification are open to the public. Any one may secure copies of them. Thus, genuine certification tags are assurance of good seed to the buyer.

IRISH COBBLER

This is the best early potato. Tho not quite so early as some it is a better yielder and better market type. It matures in about 90 days and brings in cash in mid-summer. Prospects seem to be for better prices for early potatoes this year.

We are convinced that better Cobbler seed is produced on Prince Edward Island out in the St. Lawrence Gulf, than we can raise here. Therefore our supply is all imported from that place. Connections have been established so that we are able to secure stock from the best strains and from fields that are as near disease free as can be reasonably hoped for. Last season our Prince Edward certified Cobblers yielded 423 bushels per acre at Clymer, Pa., in a farm bureau test. This was 19 bushels better than Maine seed. On muck land here in Western New York our Cobblers made 500 bushels or better in several instances. They are money makers and the returns come soon.



"The Talk of the Community"
Fine field of Cobblers in Lancaster Co., Pa. from our P. E. I. seed.

GREEN MOUNTAIN

This is a mid season variety coming in after Cobblers when planted early. It is grown most extensively however as a late crop in sections with short growing season and the cool, moist conditions under which it does best. Our Green Mountain seed also comes from Prince Edward Island and is exceptionally fine.

RURAL

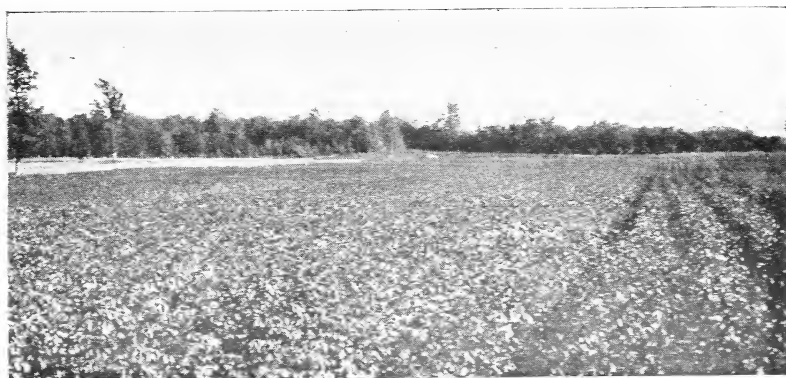
The strains formerly called Rural New Yorker, Sir Walter Raleigh, Carmen No. 3, Heavyweight, No. Nine, and several others are now all classed as Smooth Rurals or White Rurals in distinction from Russet Rurals. We refer to them as Rurals and Russets. They are the best late varieties for most of Pennsylvania, Western New York, parts of Ohio and Michigan. Both are so constituted that they can go thru a period of drouth better than other varieties. Some markets prefer the Rurals and discriminate against the Russets. This should be considered in choosing a variety.

Our Rurals are from an exceptionally good strain of Heavyweights and were all grown here. They are certified of course.

RUSSET

This variety goes under the names Russet Rural, Golden Russet, Late Petoskey and Dibble's Russet. It is a late maturing deep rooted, strong vined potato of marked vigor and wide adaptation. Under adverse conditions of soil or season it will do better than most other varieties. Under favorable conditions it makes enormous yields. Four hundred and five hundred bushel yields are becoming frequent and in the Pennsylvania 400 bushel Club contest yields of over 600 bushels and almost 700, have been secured. This variety is very resistant to scab and seems to be less subject to blight rot. Type and eating quality are fine.

We offer New York and Michigan certified Russets. Our own Russets are even better than usual and will give a good account of themselves wherever grown in 1929. Our Michigan grown certified Russets come from the northern sections and from fields which we personally selected for lowest disease counts and general vigor. They are the pick of many fields.



Our Michigan Russets are from Fields Personally Selected for
Vigor and Disease Freedom.

Grades and Sizes

The Cobblers and Mountains are graded and sized U. S. No. 1, 1 $\frac{1}{2}$ in. minimum and sacked 150 lbs. per bag.

The Michigan Russets are graded and sized U. S. No. 1, 1 $\frac{1}{2}$ in. minimum and U. S. No. 1, 1 $\frac{1}{2}$ in. to 1 $\frac{3}{4}$ in.; and are sacked 120 lbs. per bag.

Our own New York Russets and Rurals are graded and sized U. S. No. 1, 1 $\frac{11}{16}$ in. minimum which includes all potatoes large enough to cut once or more. Oversize potatoes are thrown out. This makes a medium sized grade that cuts much more economically than the usual 1 $\frac{1}{2}$ in. minimum. We believe this is a forward step in grading seed potatoes.

Economy Grade Saves Money

We also have an Economy Grade in our own seed. This grade is put up just the same as the U. S. No. 1 grade, except that we do not throw out potatoes with minor defects, such as slight grub or wire worm work, shallow cuts, sun burn, etc., which would have to be taken out for the U. S. No. 1 grade but which have just as much seed value as the others. This grade is sized 1 $\frac{11}{16}$ in. minimum as described above, and also 1 $\frac{3}{8}$ in. to 1 $\frac{11}{16}$ in. which includes all potatoes from 1 to 1 $\frac{3}{4}$ oz. which are large enough to plant whole but none that have to be cut to avoid waste or trouble in the planter. They are sacked 120 lbs. per bag.

The Geneva Experiment Station has proved that small whole seed out of certified crops will yield as well as or better than cut seed and we know that it goes further, is safer in unfavorable moisture or temperature conditions at planting time and saves labor of cutting in a busy time.

We know this "Economy Grade" will go as far and yield as well as the U. S. No. 1 and we sell it with the guarantee that we will refund payment if the buyer is not satisfied with the seed and notifies us promptly after receiving it.

Certification Tags

Official certification tags showing government or college inspection are attached to bags of all the above grades except both sizes of the Economy Grade. This seed will come from the certified fields but because differing from the grade requirements cannot be tagged.

Better Seed, Better Culture and Fewer Acres

Seed potato prices are low enough this year so that most everybody can afford to use good seed. In fact, no potato grower can afford not to, because without good seed no one can hope to keep cost per bushel below the normal price of potatoes and have a profit. The potato program should be:— **Better seed, better culture and fewer acres.** This would mean efficient production, adequate supply and fair prices—a sound basis for prosperity for any industry.

Let us help you adopt this program with Quaker Hill Farm Certified Seed. See price list and order sheet enclosed.

Dust Mixers and Dust Materials

At Quaker Hill Farm we have dusted potatoes instead of spraying, to control insects and blight, since 1921. Results have been satisfactory. For two seasons we tested spraying against dusting, under equal conditions. Control and yields were the same. We find dusting nearly twice as fast as spraying even when everything is conveniently arranged for spraying. The only disadvantage was the cost of the materials, until we began home mixing, four years ago.

The fresh home mixed dust has proved just as satisfactory and effective as that from the factory, and it is 25% to 50% cheaper. Home mixing is easy with the Quaker Hill Dust Mixer. It is a simple device which is used with ordinary dust cans, does its work quickly and requires the least possible handling of the materials and the mixture.



Believing it will be a service to our seed potato customers we are making up a quantity of these mixers to sell this spring and will supply dust materials also. Further details, illustrations, directions and prices are given in a separate folder. Better write for one now.

Fresh Home Mixed Dust Controls Insects and Blight With the Least Labor.

Quaker Hill Farm



Honeoye Falls, N. Y.

Sweet Clover

This "weed" has proved valuable and is being used more and more for temporary pastures and as a soil improving crop. It is not recommended for hay. This year with sweet clover so low priced, it will pay to use more. Its soil requirements are not quite so exacting as for alfalfa.

For Pasture

Sowing alone in the spring will make considerable pasture the first season and an abundance the second season. The more common method is to sow on winter grain or with spring grains. This will give some pasture in the fall if grain is cut high, and a full crop the next season.

Its advantages lie in furnishing late summer and fall pasture and earlier spring pasture than other crops, in withstanding drouth better than other pasture plants and especially in its yield. The amount of stock it will carry is surprising. It cannot be used for permanent pasture unless pastured lightly enough to permit natural reseeding or unless seed is broadcast every spring. This seldom proves satisfactory.

As A Soil Improver

Sweet Clover makes bigger and quicker growth than alfalfa, below ground as well as above. It thus adds much humus to the soil and at the same time much nitrogen is accumulated in the root nodules.

There are several ways to use it as a soil builder. Cheap land or idle land may be sowed to sweet clover and left as long as desired. The sweet clover will reseed itself and the land will grow richer every year. When used in rotation for hay or temporary pasture, it will be found to have improved the soil noticeably in addition to making the crop. On land that is farmed intensively, sweet clover can be squeezed in between other crops without loss of time. At Quaker Hill Farm where seed potatoes and seed oats are grown alternately in a two year rotation, sweet clover is seeded in the oats and plowed under the next spring for potatoes. This adds humus and nitrogen equivalent to a liberal coating of manure with no cost except seed, and no back aches.

Precautions

In pasturing or feeding sweet clover use the same precautions you would use with alfalfa or other clovers to guard against bloating the stock.

And in cutting or pasturing do not go below the first branches. To do so stops further growth. Mower should be rigged with special high shoes on the cutter bar.

Unscarified seed should be fall sown or sown very early in the spring.

Scarified seed is better for sowing with spring grains. It germinates quickly and so should not be sown too early as there might be freezing injury.

Inoculation of Seed

Sweet Clover is one of the legumes which requires the presence of nitrogen fixing bacteria in the soil, for its best growth. Where seeding on land that has not been known to grow sweet clover or alfalfa well, it is important to inoculate the soil or the seed with the sweet clover bacteria. Write to State College of Agriculture, Ithaca, N. Y., for Cornell Extension Bulletin 2, Legume Inoculation and for prices on cultures.

Our Seed

The seed we offer is from a hardy strain grown in Northern Michigan. It has been hulled, scarified and thoroly recleaned. Our tests give 99.8% purity, weed seeds .06%, noxious weeds 0%, germination 95%, tested February 1929.

We have tried sweet clover and like it. We think you will too. See price list and order sheet enclosed.

Corn

Varieties For All Conditions

We offer three varieties of corn which meet the requirements of practically all sections in the North Eastern States. (1) West Branch Sweepstakes for husking where the growing season is long and summer temperatures high; and for silage wherever a big corn is necessary. (2) Cornell No. 11 for husking where seasons average not less than 150 days between spring and fall frosts, or at elevations under 1000 feet; and for silage where high feed value is desired more than just tonnage. (3) Early Flints for husking where the seasons average less than 150 days between killing frosts or elevations are over 1000 feet.

West Branch Sweepstakes

Of all the big varieties yielding 16 to 20 tons of silage per acre in the N. Y. State College tests, West Branch Sweepstakes has produced the most grain in the silage. Over a period of years in various parts of New York State it has averaged 16.5 tons of silage per acre with grain in it equivalent to 1756 lbs. of dry shelled corn. In the College test here at Quaker Hill Farm last summer it produced 18 tons per acre with the equivalent of 3926 lbs. of dry shelled corn per acre, almost two tons of real grain in each acre of the silage. It can be counted upon to make from $\frac{1}{4}$ to $\frac{3}{4}$ of a ton more grain per acre in the silage than the other big corns.

This variety is thought to be the product of natural crossing of several distinct types. While so variable in appearance as to often be mistaken for a mixture, it is exceptionally vigorous, probably as a result of recent crossing. The ears range from yellow and white cap to light red and even deep red, but most ears have amber sided, white capped kernels. The ears are 12 to 18 rowed; kernels broad and somewhat shallow; cobs white and red. It matures in 110 to 130 days, depending on the season. Stalks are strong and erect, usually 10 to 12 feet tall, with abundant foliage, and is an exceptionally vigorous grower.

The seed we used came from selected ears each one tested to eliminate all showing any trace of corn diseases. The crop is of finest quality in every respect. Germination on all lots will crowd the 100% mark this year. We had one field inspected and certified. The other fields were not inspected but were grown from the same seed.

Seed of this variety costs no more than that of other big varieties but the tests have proved that it will produce silage worth \$10 to \$30 more per acre because of higher grain content. It saves on the feed bill. See price list and order sheet enclosed.

CORNELL No. 11

This is an early maturing, heavy yielding strain of Pride of the North developed by Plant breeders at N. Y. State College of Agriculture. It matures in 100 to 115 days depending on temperatures. It has very consistently ranked high in yield tests for grain, averaging nearly 70 bushels shelled corn per acre. Wherever it will mature it is highly prized for husking purposes.

It produces a good tonnage of high quality silage,—leafy enough to pack well and keep well and eat well, mature enough to have high digestibility, and grained enough to save many dollars on the feed bill. It usually is ready to cut before frost comes, which means better quality and less rush in filling silos. It is medium in height and handles easily; the neighbors will not object to helping. If part of the crop is not needed in the silo or cannot be cut because of soft ground, it will not be wasted for there will be plenty of ears fit to husk. All these advantages make Cornell No. 11 very satisfactory silage corn.

The Quaker Hill strain of Cornell No. 11 has been developed thru eight years of selection. It is slightly earlier than most of the strains and a little more uniform than some. The seed we used was field selected and ear tested. The crop is of excellent quality. Germination of 90% or better is guaranteed. See price list and order sheet enclosed.

EARLY FLINTS

Six of the best flint corns we could locate in New York and New England were grown here in test plots this year in cooperation with the Cornell Plant Breeding Dept. Results from this and future tests will show us which one to continue with.

For this year we have certified seed from two of these high yielding, early maturing flints to offer. Angel of Midnight is an 8 row yellow flint developed in the hill country of Central New York. Sheffield also is an eight row yellow flint, developed in the Berkshire Mountain section of Western Massachusetts. Both can be relied upon to mature wherever husking corn is grown in the North Eastern States.

Both yielded over 70 bushels shelled corn per acre in the College corn variety test at our farm last season. See price list and order sheet enclosed.



Eureka



West Branch Sweepstakes



Cornell No. 11

Yields of Above Varieties in College Corn Test at Quaker Hill Farm 1928

Variety	Eureka	W. B. Sweepstakes	Cornell No.11
Total Weight of Silage	21.7 tons	18.1 tons	12.6 tons
Water in the Silage	16.8 tons	13.2 tons	7.9 tons
Dry weight of shelled corn	.1 tons	2.0 tons	2.1 tons
Dry weight of leaves and stalk	4.8 tons	2.9 tons	2.6 tons
Total dry weight	4.9 tons	4.9 tons	4.7 tons

Which kind do you want to lift and lug this season ?

It is cheaper to pipe water to the cows than to carry it in the silage.

Beans

A Suggestion

Planting plans for beans should not be based on prices for the 1928 crop. Pea beans are unusually high because a rather large proportion of the acreage of this variety was ruined by excessive rains in Michigan and New York bean sections. Enough acres were planted last year and no increase is needed this year but present indications are that too many pea beans will be planted. The situation with respect to red kidney beans seems to be just the reverse. Too many were planted last year and maybe not enough will be planted this year.

What Seed To Use

The superiority of certain strains of beans is so clearly established and is so great that it is folly to use other strains. Disease resistance is the principal reason for this superiority but bred-in yielding ability and quality are also important.

Perry Marrow

At the close of the war period investigations with beans were being carried on at Perry, N. Y. by the plant doctors from Cornell. They crossed a high yielding white marrow bean with Wells Red Kidney which is very resistant to the anthracnose disease of beans. Certain of the progeny combined the good qualities of both parents. Careful selection and testing finally resulted in the Perry Marrow Bean.

The outstanding merits of this bean are its yielding ability; its great resistance to diseases; and its strong upright type of plant which carries the crop well off the ground and results in very little weather damage or spotting. Harvesting can be delayed until the crop is thoroughly dried. It matures in 120 to 130 days or about a week earlier than Robust. In our opinion it is the safest bean to grow, considering disease and weather risks.

Our Perry Marrow fields were College inspected and met certification requirements by a wide margin. Germination is 97%. This seed has been re-cleaned, graded and hand picked. It is a good investment for any bean grower. Five pecks per acre is the usual rate of sowing. See price list and order sheet enclosed.

Robust Pea Bean

In 1908 at the Michigan Agricultural College one healthy bean plant was found in a plot infested with mosaic disease. Its progeny proved practically immune to mosaic, very resistant to anthracnose and somewhat resistant to bacterial blight. Different strains were developed and in 1915 the highest yielding one was distributed to growers. No other pea bean has been available, as disease free and as high yielding as this. Yields of 40 bushels per acre have been harvested.

Robust is a small white pea bean. It has a larger root system, withstands hot weather better, blossoms later and ripens 10 days later than common pea beans. The leaves hang late, drop all together and the crop ripens evenly. In this locality it should be planted June 1 if to be followed by wheat; otherwise a little later is better.

We would like Robust better if it were earlier and more upright in habit of growth.

Our Robust fields were inspected and the seed certified with an exceptionally clean record. Germination is 98%. The seed is re-cleaned, graded and hand picked. Three pecks is sufficient for an acre. See price list and order sheet enclosed.

Wells Red Kidney Bean

About 1902. Mr. Byron Luce, a farmer living near Marion, N. Y., had a piece of beans badly affected with anthracnose. He noticed a few apparently disease free pods and gathered them. These were increased in separate plots until there were enough to plant his field. The resulting crop was conspicuously fine and attracted the attention of Mr. John Q. Wells of Shortsville. He bought the crop and gave the seed his name. Since then it has been further improved by selection.

This bean is very resistant to anthracnose, not much affected by mosaic but susceptible to blight. At Geneva Experiment Station Dr. Gloyer has found that planting not earlier than June 15 to 20 enables it usually to escape most of the blight. In some seasons this is a little late to be sure of maturing the crop by fall. It may be safer to plant a little earlier. Selecting a location with good soil drainage and good air drainage helps prevent blight, and so does generous fertilizing especially with a fertilizer fairly strong in nitrogen.

Our seed is second crop from certified seed, not having been inspected in '25 or '27. Germination is 95%. Five pecks or a little more, are planted per acre. See price list and order sheet enclosed.

New Strains

We have received from the State Experiment Station at Geneva, N. Y. small quantities of the new Geneva Red Kidney, York Red Kidney and Geneva Selection White Kidney and have been increasing them for distribution. Limited quantities will be available next year, weather permitting. These beans promise much in both quality and yield. Credit for their development is due Dr. W. O. Gloyer.

A new pea bean has been developed by Dr. D. Reddick of the State College of Agriculture at Ithaca and will be available in about two years. This bean is considered better than Robust.

Free Bulletins on Beans

Cornell Extension Bulletin 98. The Production and Marketing of Field Beans.

Cornell Extension Bulletin 58. Diseases, and Insect and Animal Pests, of the Field Bean in New York.

Write to Mailing Dept., Col. of Agr., Ithaca, N. Y.



Typical Plant of Geneva
Red Kidney Bean

York Red Kidney and Geneva Selection White Kidney have the same type plant. They carry a heavy crop well off the ground and suffer little in bad harvest weather.

Photo courteously furnished by Dr. W. O. Gloyer, N. Y. State Agr. Exp. Station, Geneva, N. Y.

Quaker Hill Danish Cabbage

Prospects for 1929 Late Cabbage

Having hit the mark very closely in our last year's forecast of late cabbage prospects we venture to give our opinion of this year's prospects.

Larger plantings than last season's will be planned but we do not expect that the acreage finally set will be dangerously larger than the normal acreage. Weather will be the principal factor in determining price. In other words \$10 to \$12 per ton to the grower in Western New York is to be expected with normal weather for cabbage, lower prices if the season is favorable and better prices if the season is unfavorable. Forty dollar prices should be forgotten.

It may be well to set part of one's acreage a couple of weeks earlier than usual and be prepared to start harvesting early in case over production should occur. Early marketing usually pays best when there is an over supply.

Cost Per Ton

The average cost to produce and market cabbage on 41 fields, 1923 to 1927 as shown by cost account records, was \$13.88 per ton. With the possibilities of \$10 or less for cabbage next fall, it is obvious that we shall have to produce at lower cost than that. There is little chance of reducing the cost of the various operations without also reducing yield. The only practical way to reduce cost per ton is to increase yield per acre without proportional increase in cost. This is easier than it seems. Using seed from a proven high-yielding strain will do it.

In a test of 21 strains of Danish Ballhead conducted at Cornell last season, all under equal conditions, the yields varied from 10 tons to over 18 tons per acre. Assume the 10 ton yield cost \$100 to grow and harvest; the cost per ton would be \$10.00. Then allow \$4.00 (which is high) per ton for harvesting and marketing the extra 8 tons of the 18 ton crop, and allow \$4.00 per acre (\$8.00 per lb.) for the extra cost of the better seed, and we have a cost per acre of \$136.00 but the cost per ton of only \$7.55 for the 18 ton crop. There would be a profit of nearly \$44.00 per acre with the market only \$10.00 per ton.

High-Yielding Strains

Similar strain tests in previous years at Cornell have shown the same range in yield. Cabbage growers are using seed from the low-yielding



Quaker Hill Danish Cabbage
Usually yields 2 to 8 tons more per acre than imported seed. Yield of field above was 25 tons per acre.

strains as well as the high yielders. The important point in these tests is that the same four or five strains head the list each year. There is no accident about it; they are consistently better yielders. Farm Bureau tests in New York and Pennsylvania tell the same story. It is proven beyond question that many strains of cabbage seed on the market are consistently low yielders and cannot be expected to show a profit; but that a few strains are consistently high yielders and can be relied upon to produce at low cost per ton.

Quaker Hill Danish is one of these better strains. It usually yields 15 to 20 tons per acre and under favorable conditions yields 20 to 30 tons. Its quality is as good as its yield.

How Yield and Quality Are Secured

We started in 1921 with what was unquestionably the best strain of short stem Danish available. It originated from an artificial cross and was improved by long and rigorous selection. By the same methods we are striving to still further improve it. Only the finest of the matured heads are saved for raising the seed. Each one is scrutinized closely when saved and again when set out. Our seed plot is located miles from any other so that crossing with other strains by bees is not to be feared. All this results in uniformity as well as yielding ability and quality.



Quaker Hill Danish Seed Is All Grown At Quaker Hill Farm
from Individually Selected Healthy, Ideal Type, High Yielding Mature Heads.
No other cabbage seed is grown within miles of us.

Most of the cabbage seed on the market is from immature heads whose yielding ability, type, and quality cannot be told. At best the seed is two generations and often several generations from selected mature heads. Since cabbage is cross pollinated, this method allows double or treble the opportunity for reverting and inevitably results in greater variation and lower yields. Seed raised by this cheap method is wholesaled here at \$.75 to \$1.50 per lb.

Compared with Quaker Hill Strain seed, all of which is first crop from selected mature heads, this cheap seed usually produces 2 to 3 tons less and is much poorer in quality. It doesn't take long to figure which pays best.

Description

Stem. Short, substantial, carries the head well.

Shape. Head deep, rounding top and sides, slightly tapering base. Compactness permits close setting which is necessary for large yields of best market size heads, 4 to 6 lbs. Tapering base makes cutting easy and trimming unnecessary. Leaves cling better.

Solidity. Leaves have long lap over top. They bind under pressure of

growth from center, and interior becomes very compact. Heads usually weigh about 30% more than heads of the same size in most other strains. Long overlap prevents cracking.

Storage and shipping qualities. Solidity makes it a wonderful keeper. Stands handling well, shrinks little, trims easily, holds color beautifully.

Color. Bluish tint in green, typical of true Danish, and pink blush on cheek. A well faced ear is a beautiful sight. The buyer will want more.

Texture and flavor. Leaves thin, tender, comparatively smooth. Ribs and vines not coarse or stringy. Flavor delicate, a little sweet yet spicy but without bitterness. Fit for an Epicure.

Yield. Fifteen to twenty tons under ordinary good treatment, and twenty to thirty under favorable conditions, with ample fertilizer.

Uniformity. Very good. Noticeably better than most imported stocks.

Our Seed

Our seed is produced from disease free stock but every ounce of it is hot water treated to kill any disease organism that might be carried on or in the seed. It is also treated with an organic mercury dust to protect the seedlings from damping off diseases that may be in the seed bed.

This method of treating is much more expensive than any other but it is the only method that can be relied upon for complete protection. The losses from these diseases especially black leg and black rot, may be so serious that we will not sell seed unless it is hot water treated, even tho field inspection and laboratory tests show our plants and seed to be disease free.

Our tests show purity by weight 99.8%, weed seeds trace, germination 98% before treating. If the germination is lower than 90 after treating (it sometimes loses a few points) we shall allow enough more seed for a pound to make it equivalent to 90% germination.

Allow one pound of seed for two to four acres of cabbage. It is better to have some plants to sell than to have to buy some.

This is the cheapest cabbage seed one can buy, because it will more than pay for itself with bigger yield, better quality and more satisfaction. Try it. See price list and order sheet enclosed.



Close Setting Pays

Quaker Hill Danish is adapted to the close setting necessary for large yields of best market type. Uniform sized plants set 32" by 17" give good results.

It was the largest yield I ever had.... there were 55 tons on the measured 2 acres....

F. E. Williams - Chenango Co., N. Y.

.....I have grown this seed for two years in Pa. State College strain tests and am well satisfied with it.

C. H. Belknap - Erie Co. Pa.

Last fall and winter you shipped us some very fine Danish cabbage....wire us on your first offerings this fall.

Martin-Kessler Co. - Philadelphia, Pa.

We harvested 25 tons per acre from the 5 acre field.

C. R. White - Ontario Co., N. Y.

GRAINS FOR FALL SOWING

Forward Wheat

This strain, originated by the plant breeders at the N. Y. State College of Agriculture, was developed from a beardless head of Fulcaster wheat. It is like this variety except that the beardless character is retained and it out-yields the parent stock. The large heads have white chaff and are carried on good stout straw that will stand where other wheats lodge. The grain is large, red and somewhat hard. It has a high protein content, testing as high as 13% and making it valuable as poultry feed. Milling and baking qualities are the best. It is used for bread flour but is not liked for pastry flour or shredded wheat and should not be grown for mills that specialize on pastry flour. This strain has proven very winter hardy, very resistant to Hessian fly and almost immune to loose smut. It is susceptible to stinking smut, as are most all varieties. Forward Wheat ripens a few days earlier than the white wheats of Western New York and should be cut before fully ripe because of a tendency to shell. In the College tests at Ithaca, Forward has out-yielded the other recommended wheats, Honor and Junior, No. 6, Red Rock, Fulcaster, Pennsylvania 44 and all common varieties. In the last six years at Ithaca, N. Y., Forward yielded from 27.7 to 46.3 bushels per acre and averaged 34.2 bushels. It seems to be best adapted to strong soils and is recommended for such soils in New York, Pennsylvania, Ohio, the Virginias and Maryland. It seems to be the best wheat yet introduced in the East.

Honor Wheat

This wheat originated from a single exceptionally fine head of Dawson's Golden Chaff and has been improved by constant selection by the College plant breeders. It ranks among the highest yielding white wheats and is preferred because of its winter hardiness and fly resistance. Like other wheats it is susceptible to stinking smut and also slightly susceptible to loose smut. The heads are long, well filled, beardless with bronze chaff. The grain is white or light amber, of medium length and hardness. The milling qualities are good. It is especially liked for pastry flour and shredded wheat. In five years at Ithaca Honor yielded from 27.5 to 46 bushels per acre and averaged 31.5 bushels. Honor is the best white wheat for Western New York and can be recommended for adjacent states also.

Rosen Rye

Rosen is a pure line rye developed by the plant breeders of the Michigan Agricultural College from a sample brought from Russia by a student named Rosen. It has been highly developed by head selections. Registered seed is produced under isolated conditions on South Manitou Island in Northern Michigan. Our stock seed came from there.

Rosen rye is recognized by the large plump berry of uniform deep color. Heads are long and well filled; straw is good. Its yields average nearly twice as large as those from common rye.

Cornell No. 76 Rye

Several pure lines of rye have been developed by the plant breeders at Cornell. Two of them, No. 76 and 45, have proved equal to, if not better than Rosen rye, which has held first place for some years.

Diseases of Wheat and Rye

Unfavorable weather during the last several seasons has so weakened wheat and rye plants that several diseases have gained foothold. Smuts, scab, take all, glume blotch and other diseases have become rather serious. Growers should watch their fields next summer and if much disease is present, arrange for certified, treated seed to plant next fall.

Seed Available in August

Write for inspection reports and prices of our seed next summer.





Methods Have Changed and So Have Seeds
Are Your Seeds Up To Date?